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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,911	02/06/2004	Min-Hao Kuo	MSU-08548	8594

7590 03/21/2006

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EXAMINER

JOIKE, MICHELE K

ART UNIT	PAPER NUMBER
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1636

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/773,911	KUO, MIN-HAO	
	Examiner	Art Unit	
	Michele K. Joiike, Ph.D.	1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 1-16, 21-23 and 26-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17, 19, 20, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse in the reply filed on January 30, 2006 is acknowledged. Claims 1-16, 21-23 and 26-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on January 30, 2006.

Claim Objections

Claim 18 is objected to because of the following informalities: The claim comprises a DNA-binding moiety, GDBD. GDBD needs to be spelled out the first time it is used. Appropriate correction is required.

Claim 20 is objected to because of the following informalities: The words "derived from" appear twice. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 19 and 20 use the language "derived from".

Art Unit: 1636

Use of the term "derived from" in the context of a Markush group is vague. It is unclear how closely related the derived from material is to the original material.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17, 19, 20, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Criel et al. Applicant claims a method for detecting protein-protein interactions with the interaction requiring a post-translational modification of one of the proteins. The host cell comprises a detectable gene that expresses a detectable protein when activated. It also comprises two chimeric genes. The first chimeric gene comprises DNA sequences encoding a test protein comprising a reactive moiety capable of being modified, a DNA binding moiety and a catalytic moiety capable of modifying the test protein. The second chimeric gene comprises a DNA sequence encoding a second test protein and a transcriptional activation domain. The second protein interacts with the first protein after the first protein has been modified. Interaction between the proteins causes expression of the detectable gene. The method is further limited to include a library of plasmids with the first and second test proteins. The test proteins can be bacterial, viral, oncogene-encoded, mammalian, fungal or plant.

Art Unit: 1636

Van Crieke et al (Biol. Procedures Online, 2:1-38, 1999, specifically pp. 3, 13, 29-30, figures 1, 2 and 7) teach a method for detecting protein-protein interactions, specifically a yeast three-hybrid system that can be used to detect protein-protein interactions that depend on post-translational modifications. The higher eukaryotic cells comprise a *lacZ* reporter gene that expresses a detectable protein when activated. It also comprises two chimeric genes. The first chimeric gene comprises DNA sequences encoding a test protein comprising a reactive moiety capable of being phosphorylated by a kinase, a DNA binding domain and a kinase capable of modifying the test protein. The second chimeric gene comprises a DNA sequence encoding a second test protein and a transcriptional activation domain. The second protein interacts with the first protein after the first protein has been modified. The test protein, kinase and DNA binding domain are encoded by sequences all on the same plasmid. Interaction between the proteins causes expression of the *lacZ* gene. The method can also be performed with a library of plasmids (Fig. 2). As such, Van Crieke et al anticipate every aspect of the claimed invention.

Allowable Subject Matter

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michele K. Joike, Ph.D. whose telephone number is 571-272-5915. The examiner can normally be reached on M-F, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Irem Yucel, Ph.D. can be reached on 571-272-0781. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michele K Joiike, Ph.D.
Examiner
Art Unit 1636


DAVID GUZO
PRIMARY EXAMINER